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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,595	07/11/2006	Yumi Muroi	125.405	1142
27049 7590 11/16/2009 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
CORNO JR, JAMES A				
ART UNIT		PAPER NUMBER		
1793				
NOTIFICATION DATE		DELIVERY MODE		
11/16/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction27049@oliff.com  
jarnstrong@oliff.com

### Office Action Summary

**Application No.**

10/549,595

**Applicant(s)**

MUROI ET AL.

**Examiner**

JAMES CORNO

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3, 5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, see pages 4 and 5, filed June 22, 2009, with respect to the rejection(s) of claim(s) 1-7 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Guile, Paisley, Haan, Swezey, Otaka, and Bonzo.

The new rejections presented below were necessitated by the amendment specifying the location of the scraper. The rejections are therefore made final.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3, 5 and 7 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the scraper being on contact with the end surface of the honeycomb carrier, does not reasonably provide enablement for the slide member being in contact with the end surface. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

According to the specification, it is the scraper and the not the slide member (bottom of the tank) that contacts the end surface. As claimed, the bottom of the tank is "in contact with the end surface."

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guile in view of either of Haan (*Popular Mechanics* **96**(4), p. 182-187, October 1951) or Swezey (*Popular Science* **131**(2), p. 77-78, August 1937), further in view of Herzog 3,762,365. Guile teaches a method of selectively plugging the openings of a honeycomb structure by masking the openings, immersing the masked end in a slurry, and pressing the structure down, after which the structure is removed from the slurry and fired. Guile does not teach the step of removing excess slurry from the end of the honeycomb. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to scrape any excess from the end of the honeycomb to reduce waste and to provide a clean end surface.

Guile does not teach that the scraping is performed during the application of the slurry. However, this is a well-known method of filling holes. See, for example, Haan and Swezey, in which the edge serves as the scraper. One of ordinary skill in the art at

the time of the invention could have selected any well known means of applying filler to openings, including a scraper, with predictable results and a reasonable expectation of success.

Further, Herzog teaches that it is known to use a wiper blade in combination with a tank of coating material to fill openings in a surface and use relative movement between the surface and the wiper blade to remove excess coating material from the surface (Abstract and Figure 2).

It would have been obvious to one of ordinary skill in the art to have used a combination of scraper or wiper blade and tank to not only apply the slurry to the openings in the honeycomb but also remove excess from the honeycomb as suggested by Herzog for coating a surface having openings to be filled with coating material and then excess removed from the surface. Providing the relative movement between the honeycomb and the tank/wiper blade by either moving the honeycomb relative to the tank or moving the tank/wiper blade relative to the honeycomb would have been obvious to one of ordinary skill in the art as achieving the same effect of movement of the honeycomb across the wiper blade to remove excess slurry from the honeycomb surface.

Regarding claim 5, it would have been obvious to one of ordinary skill in the art at the time of the invention to remove the slurry before drying it so that the excess may be reused.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guile in view of either of Haan or Swezey as applied to claim 1 above, and further in view of Otaka (US Patent No. 4,818,317). Guile does not specifically teach a drying step. Otaka teaches that the plugging material should be dried by hot air immediately after plugging to prevent absorption into the honeycomb structure. It would have been obvious to one of ordinary skill in the art at the time of the invention to dry Guile's plugged structure immediately after plugging to prevent absorption into the honeycomb structure.

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paisley (US Patent No. 4,432,918) in view of either of Haan or Swezey, further in view of Herzog 3,762,365. Paisley teaches a method of plugging the openings of a honeycomb structure by immersing the end in a slurry and pressing down so the honeycomb contacts the bottom of the container (see Fig. 2b), after which the structure is removed from the slurry and allowed to dry.

Paisley does not teach the step of removing excess slurry from the end of the honeycomb. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to scrape any excess from the end of the honeycomb to reduce waste and to provide a clean end surface.

Paisley does not teach that the scraping is performed during the application of the slurry. However, this is a well-known method of filling holes. See, for example, Haan and Swezey, in which the edge serves as the scraper. One of ordinary skill in the

art at the time of the invention could have selected any well known means of applying filler to openings, including a scraper, with predictable results and a reasonable expectation of success.

Further, Herzog teaches that it is known to use a wiper blade in combination with a tank of coating material to fill openings in a surface and use relative movement between the surface and the wiper blade to remove excess coating material from the surface (Abstract and Figure 2).

It would have been obvious to one of ordinary skill in the art to have used a combination of scraper or wiper blade and tank to not only apply the slurry to the openings in the honeycomb but also remove excess from the honeycomb as suggested by Herzog for coating a surface having openings to be filled with coating material and then excess removed from the surface. Providing the relative movement between the honeycomb and the tank/wiper blade by either moving the honeycomb relative to the tank or moving the tank/wiper blade relative to the honeycomb would have been obvious to one of ordinary skill in the art as achieving the same effect of movement of the honeycomb across the wiper blade to remove excess slurry from the honeycomb surface.

Regarding claim 5, it would have been obvious to one of ordinary skill in the art at the time of the invention to remove the slurry before drying it so that the excess may be reused.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paisley in view of either of Haan or Swezey as applied to claim 1 above, and further in view of Otaka. Paisley does not specifically teach a step of drying by heat or air. Otaka teaches that the plugging material should be dried by hot air immediately after plugging to prevent absorption into the honeycomb structure. It would have been obvious to one of ordinary skill in the art at the time of the invention to dry Paisley's plugged structure immediately after plugging to prevent absorption into the honeycomb structure.

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Guile in view of Bonzo, Haan, and Swezey, further in view of Herzog 3,762,365 or Paisley in view of Bonzo, Haan, and Swezey, further in view of Herzog 3,762,365. Guile teaches a method of selectively plugging the openings of a honeycomb structure by masking the openings, immersing the masked end in a slurry, and pressing the structure down. Paisley teaches a method of plugging the openings of a honeycomb structure by immersing the end in a slurry and pressing down so the honeycomb contacts the bottom of the container (see Fig. 2b), after which the structure is removed from the slurry and allowed to dry. Neither Guile nor Paisley teaches the step of removing the excess slurry from the end of the structure. However, Bonzo teaches excess slurry should be wiped away from the ends of honeycomb structure when selectively plugging openings. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the cleaning method of Bonzo to the plugging



method of either Guile or Paisley in order to maintain the exterior shape of the honeycomb structure.

Guile does not teach that the scraping is performed during the application of the slurry. However, this is a well-known method of filling holes. See, for example, Haan and Swezey, in which the edge serves as the scraper. One of ordinary skill in the art at the time of the invention could have selected any well known means of applying filler to openings, including a scraper, with predictable results and a reasonable expectation of success.

Further, Herzog teaches that it is known to use a wiper blade in combination with a tank of coating material to fill openings in a surface and use relative movement between the surface and the wiper blade to remove excess coating material from the surface (Abstract and Figure 2).

It would have been obvious to one of ordinary skill in the art to have used a combination of scraper or wiper blade and tank to not only apply the slurry to the openings in the honeycomb but also remove excess from the honeycomb as suggested by Herzog for coating a surface having openings to be filled with coating material and then excess removed from the surface. Providing the relative movement between the honeycomb and the tank/wiper blade by either moving the honeycomb relative to the tank or moving the tank/wiper blade relative to the honeycomb would have been obvious to one of ordinary skill in the art as achieving the same effect of movement of the honeycomb across the wiper blade to remove excess slurry from the honeycomb surface.

Regarding claim 5, Bonzo teaches that the slurry should be removed before firing.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over either of Guile in view of Bonzo, Haan, and Swezey, or Paisley in view of Bonzo, Haan, and Swezey, as applied to claim 1 above, and further in view of Otaka. Neither Guile nor Paisley specifically teaches a step of drying by heat or air. Otaka teaches that the plugging material should be dried by hot air immediately after plugging to prevent absorption into the honeycomb structure. It would have been obvious to one of ordinary skill in the art at the time of the invention to dry Paisley's plugged structure immediately after plugging to prevent absorption into the honeycomb structure.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over either of Guile in view of Otaka, Haan, and Swezey, further in view of Herzog 3,762,365 or Paisley in view of Otaka, Haan, and Swezey, further in view of Herzog 3,762,365.

Guile teaches a method of selectively plugging the openings of a honeycomb structure by masking the openings, immersing the masked end in a slurry, and pressing the structure down. Paisley teaches a method of plugging the openings of a honeycomb structure by immersing the end in a slurry and pressing down so the honeycomb contacts the bottom of the container (see Fig. 2b), after which the structure is removed from the slurry and allowed to dry. Neither Guile nor Paisley specifically teaches a step of drying by heat or air. Otaka teaches that the plugging material should

be dried by hot air immediately after plugging to prevent absorption into the honeycomb structure. It would have been obvious to one of ordinary skill in the art at the time of the invention to dry a plugged honeycomb structure immediately after plugging to prevent absorption into the honeycomb structure.

Neither Guile nor Paisley teaches that the scraping is performed during the application of the slurry. However, this is a well-known method of filling holes. See, for example, Haan and Swezey, in which the edge serves as the scraper. One of ordinary skill in the art at the time of the invention could have selected any well known means of applying filler to openings, including a scraper, with predictable results and a reasonable expectation of success.

Further, Herzog teaches that it is known to use a wiper blade in combination with a tank of coating material to fill openings in a surface and use relative movement between the surface and the wiper blade to remove excess coating material from the surface (Abstract and Figure 2).

It would have been obvious to one of ordinary skill in the art to have used a combination of scraper or wiper blade and tank to not only apply the slurry to the openings in the honeycomb but also remove excess from the honeycomb as suggested by Herzog for coating a surface having openings to be filled with coating material and then excess removed from the surface. Providing the relative movement between the honeycomb and the tank/wiper blade by either moving the honeycomb relative to the tank or moving the tank/wiper blade relative to the honeycomb would have been obvious to one of ordinary skill in the art as achieving the same effect of movement of

the honeycomb across the wiper blade to remove excess slurry from the honeycomb surface.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES CORNO whose telephone number is (571)270-5829. The examiner can normally be reached on Monday-Thursday 9:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melvin Curtis Mayes can be reached on 571-272-1234. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES CORNO/  
Examiner, Art Unit 1793

November 9, 2009

/Melvin Curtis Mayes/  
Supervisory Patent Examiner, Art Unit 1793